Name:

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Geometry, Period

Due Date: Fri, 6 Feb 2015

**Geometry**

**Homework**



**I. PROOFS ~ Directions: Use A T-chart proof ( statement | reason OR S | R ) to justify which triangles are congruent.   
You must COLOR-CODE the angles or sides that you are using to make your proof.**

|  |  |
| --- | --- |
| **Statement** | **Reason** |
| 1. ∠CAB ≅  2. ∠  3. ≅  4. ∆ \_\_\_\_\_\_\_\_\_\_ ≅ ∆ \_\_\_\_\_\_\_\_\_\_ | 1.  2.  3.  4. \_\_\_ \_\_\_ \_\_\_ |

1) **Prove ∆CAB ≅ what triangle?**

C

B

A

D

E



2) **What triangle is congruent to ∆ABC? Write your proof in the space to the right:**

D

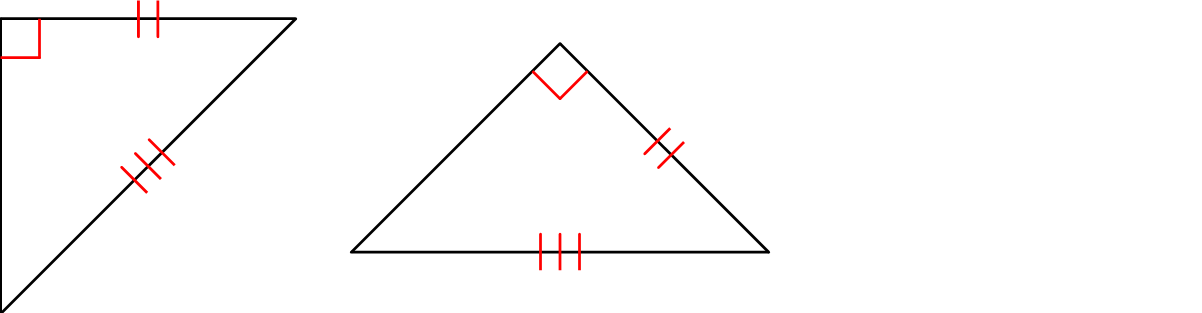
A

B

C

E

F



**II. CONGRUENT or NAH?**

For the problems below, determine **if** the two triangles are congruent. COLOR-CODE only the sides and angles that are congruent. If they ARE congruent, write a congruency statement (**∆\_ \_ \_ ≅ ∆\_ \_ \_)**  AND identify what postulate or theorem (SSS, SAS, ASA, AAS, HL) is needed to show the congruency. If NOT congruent, **explain *why* not**.

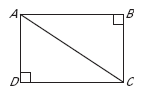
|  |  |
| --- | --- |
| 3) | 4) |
| 5) | 6) |

***Continue with the same instructions as above. (Read the instructions carefully!)***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 7) | | 8) | 9)    C  F  E  D  B  A | |
| 10)  A  C  D  B | 11)  E  C  B  D  A | | | 12) |

**13) Given** *ABCD* is a rectangle. (Think about the information this gives you! What do you know about rectangles?)

**Prove** ∆*CAB* ≅?



a) What type of triangle is ∆*CAB*? What are the names for the 3 sides (be specific – give the line names)?

b) If line segment AD is 5 inches long, how long is line segment CB?

c) If line segment AC is 13 inches long, calculate the length of line segment DC.

d) If the measure of angle DAC is 67 degrees, what is the measure of angle CAB?